

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
21 October 2004 (21.10.2004)

PCT

(10) International Publication Number  
**WO 2004/089782 A2**

(51) International Patent Classification<sup>7</sup>: **B65D 83/14**

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(21) International Application Number:  
PCT/US2004/009874

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(22) International Filing Date: 30 March 2004 (30.03.2004)

(25) Filing Language: English

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(26) Publication Language: English

(30) Priority Data:  
60/458,418 31 March 2003 (31.03.2003) US

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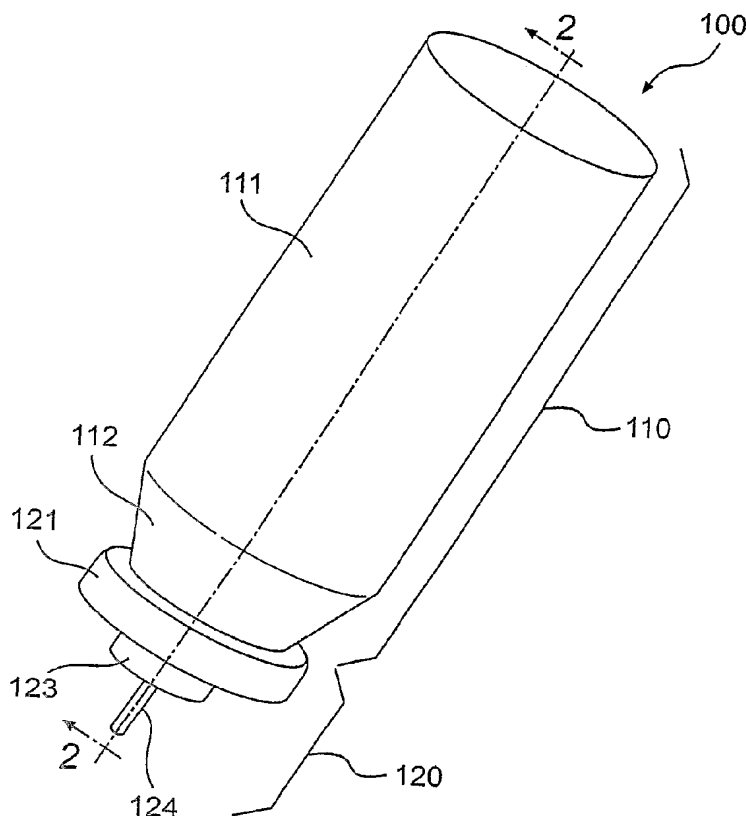
(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),

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[Continued on next page]

(54) Title: COLLAR FOR INHIBITING THE COUPLED USE OF A CONTAINER AND A DISPENSER



(57) Abstract: A collar (210, 320) is secured to a conventional container (100) such that the collar (210, 320) obstructs the coupled use of the conventional container (100) and a conventional medicinal dispenser (990). The collar (210, 320) is secured to the container at a canister portion (110) of the conventional container (100) or at a valve assembly portion (120) of the conventional container (100). The collar (210, 320) may further include a spray tip (429).

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Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**Published:**

- *without international search report and to be republished upon receipt of that report*

## **COLLAR FOR INHIBITING THE COUPLED USE OF A CONTAINER AND A DISPENSER**

### **5 BACKGROUND OF THE INVENTION**

#### **1. Field of the Invention**

[0001] Our invention relates generally to an apparatus, securable to a conventional container,  
10 which inhibits the coupled use of the container and a dispenser. More particularly, our invention relates to a collar that prevents containers containing, for example, potentially noxious compounds from being mistakenly inserted into devices that are used to administer medicinal products via inhalation.

#### **15 2. Description of the Related Art**

[0002] The containers discussed herein typically include, but are not limited to, aerosol containers that are used in conjunction with dispensers for dispensing aerosol products that are contained within the containers. The containers typically contain pressurized contents  
20 and have a valve disposed at a distal end of the container for releasing the pressurized contents. The valved-end is inserted into the dispenser, which can actuate the valve, thereby effecting the release of the contents of the container.

[0003] Container manufacturers provide a wide variety of such conventional containers to  
25 different industries that utilize the containers for packaging their varied products for sale to the public, or to private buyers. Though there are many variations of conventional containers, they generally come in standard shapes and sizes. Consequently, different industries often use the same containers for packaging their products, creating a potential for confusion. This confusion includes, for example, possible confusion between containers used

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for inhalation medications and containers used for common household products that may be noxious if mistakenly inhaled. For instance, certain containers used for packaging air freshener, although sold to be used only with air freshener dispensers, can be mated with, and actuated by, conventional asthma medication dispensers, or medicinal inhalers. While the mistaken inhalation of, for example, air freshener is unlikely to occur, and may not result in any harm, because there are other products that utilize containers that are compatible with inhalers, including insect repellents and disinfectants, the potential for harm may be great in some circumstances.

**[0004]** Consider, for instance, what might happen if an asthma sufferer mistakenly inserted a container that was not intended for use with an inhaler, into the inhaler. The potential for harm is two-fold. First, the asthma sufferer might unexpectedly be without his medication at the onset of an attack, and, second, inhalation of the container's contents may exacerbate the attack.

**[0005]** As general precautions to eliminate these problems, industries typically label their containers with warnings and/or some indication of a container's content. Furthermore, even when two containers containing different products may fit the same dispenser, a disparity in size may trigger a user of the contents as to the intended use. Thus, there are simple ways in which a person can distinguish between two containers that are compatible with the same dispenser. However, in addition to increasing a person's ability to distinguish between multiple, similar containers, it is desirable to provide a preventive measure that requires no recognition on the user's part.

## SUMMARY OF THE INVENTION

[0006] Our invention provides a versatile apparatus for combined use with a conventional container that addresses at least the problems noted above.

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[0007] According to one aspect of our invention, a collar that is securable to a container inhibits the coupled use of the container and a dispenser that is capable of effecting the release of the contents of the container, but is not intended for that purpose. The collar includes means for securing the collar to the container and means for preventing the  
10 container, with the collar secured thereto, from being mated to the dispenser. Because the container cannot be mated with the dispenser, the dispenser cannot effect the release of the contents of the container.

[0008] In another aspect, a collar that is securable to a container having at least a main body  
15 and a tapered portion inhibits the coupled use of the container and a dispenser that is capable of effecting the release of the container's contents, but is not intended for that purpose. The collar includes means for securing the collar to the container, an annular sidewall having an inner surface, and a tapered sidewall. The tapered sidewall depends upwardly and radially inwardly from an end of the annular sidewall. When the collar is secured to the container, at  
20 least a portion of the inner surface of the annular sidewall contacts a portion of the main body of the container and at least a portion of the inner surface of the tapered sidewall contacts a portion of the tapered portion of the container. Also, the collar, when secured to the container, increases an overall circumference of the container such that the container cannot be mated with the dispenser.

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[0009] According to yet another aspect, our invention relates to a collar that is securable to a container having at least a valve assembly. The collar inhibits the coupled use of the container and a dispenser that is capable of effecting the release of the container's contents, but is not intended for that purpose. The collar includes means for securing the collar to the container, an annular sidewall having an inner surface, a ceiling having an undersurface, and a flange. The ceiling depends radially inwardly from an end of the annular sidewall and terminates to form an opening through the ceiling. The flange depends radially outwardly from the annular sidewall. When the collar is secured to the container, the collar increases an outer circumference of the container such that the container cannot be mated with the dispenser.

[0010] According to a still further aspect, our invention relates to a collar that is securable to a container having at least a canister portion and a valve assembly portion including a valve stem. The collar inhibits the coupled use of the container and a dispenser that is capable of effecting the release of the contents of the container, but is not intended for that purpose. The collar includes an annular sidewall, a ceiling, and a spray tip. The ceiling depends radially inwardly from the annular sidewall. The spray tip is biasedly supported on the ceiling. When the collar is secured to the container, the spray tip is aligned proximate to the valve stem of the valve assembly of the container. Also, the collar increases an outer diameter of the container such that the container, with the collar secured thereto, cannot be mated with the dispenser.

[0011] A better understanding of these and other features and advantages of our invention may be had by reference to the drawings and to the accompanying detailed description of the preferred embodiments, in which preferred embodiments of the invention are illustrated and described.

**BRIEF DESCRIPTION OF THE DRAWINGS**

[0012] FIG. 1 is a perspective view of a conventional container.

5 [0013] FIG. 2 is a cross-sectional view taken along line 2-2 in FIG. 1.

[0014] FIG. 3 is a perspective view of a conventional medicinal dispenser.

[0015] FIG. 4 is a cross-sectional view taken along line 4-4 in FIG. 3.

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[0016] FIG. 5 is a cross-sectional view showing the container of FIG. 2 mated to the dispenser of FIG. 4.

[0017] FIG. 6 is a perspective view of a collar according to an embodiment of our invention.

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[0018] FIG. 7 is a cross-sectional view taken along line 7-7 in FIG. 6.

[0019] FIG. 8A is a perspective view of a collar according to another embodiment of our invention.

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[0020] FIG. 8B is a perspective view of a collar according to another embodiment of our invention.

[0021] FIG. 9 is a cross-sectional view taken along line 9-9 in FIG. 8A.

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[0022] FIG. 10 is a perspective view of the collar of FIG. 6 or the collar of FIG. 8A secured to a conventional container.

[0023] FIG. 11 is a cross-section view taken along line 11-11 in FIG. 10.

[0024] FIG. 12 is a perspective view of the collar/container combination of FIG. 10 inserted  
5 in a conventional medicinal dispenser.

[0025] FIG. 13 is a cross-sectional view taken along line 13-13 in FIG. 12.

[0026] FIG. 14 is a perspective view of a collar according to a further embodiment of our  
10 invention.

[0027] FIG. 15 is a cross-sectional view taken along line 15-15 in FIG. 14.

[0028] FIG. 16 is a perspective view of a still further embodiment of our invention.

[0029] FIG. 17 is a cross-sectional view taken along line 17-17 in FIG. 16.

[0030] FIG. 18 is a perspective view of the collar of FIG. 14 or the collar of FIG. 16 secured  
to a conventional container.

[0031] FIG. 19 is a cross-sectional view taken along line 19-19 in FIG. 18.

[0032] FIG. 20 is a perspective view of the collar/container combination of FIG. 18 inserted  
in a conventional medicinal dispenser.

[0033] FIG. 21 is a cross-sectional view taken along line 21-21 in FIG. 20.



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[0034] FIG. 22 is a perspective view of a collar according to yet another embodiment of our invention.

[0035] FIG. 23 is a cross-sectional view of the collar of FIG. 22 secured to a conventional  
5 container.

[0036] Throughout the figures, like or corresponding reference numerals designate like or corresponding parts.

## 10 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0037] As best illustrated in FIGS. 1 and 2, a conventional container 100 includes a canister 110 and a valve assembly 120. The canister 110 includes a substantially cylindrical body portion 111 and a tapered neck portion 112 extending from a distal end of the body portion 111. The valve assembly 120 is attached to the tapered neck portion 112 of the canister 110.  
15 The valve assembly 120 includes a first cylindrical portion 121 and a second cylindrical portion 123. The first cylindrical portion 121 is larger in circumference than the end of the tapered neck portion 112 to which it is attached and the second cylindrical portion 123 is smaller in circumference than the first cylindrical portion 121, thereby forming a step 122 on  
20 the first cylindrical portion 121, proximate to the second cylindrical portion 123. An aperture extends through both the first cylindrical portion 121 and the second cylindrical portion 123, through which a valve stem 124 is disposed. The valve stem 124 is tube-like.

[0038] In use, the conventional container 100 is conjoined with a dispenser (for example, a  
25 medicinal dispenser 990 as shown in FIG. 3). The dispenser may take many forms, but, of necessity, the dispenser actuates the valve stem 124 of the container 100 by biasing the valve stem 124 in a direction toward the canister 110. Such actuation opens a valve (not shown),

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thereby causing a release of the pressurized contents of the container 100 from within the container 100, through the valve stem 124. As discussed above, an example of a particular dispenser is a medicinal dispenser 990, such as an asthma inhaler. As shown in FIGS. 3 and 4, for example, such a conventional medicinal dispenser 990 includes a cavity 991 and a valve seat 992. In use, as illustrated in FIG. 5, a container having medicinal contents is inserted into the cavity 991, resulting in the valve stem 124 of the container mating with the valve seat 992 of the conventional medicinal dispenser 990. When a user relatively displaces the container 100 toward the medicinal dispenser, i.e., biases the valve stem 124 into the valve seat 992, the contents of the container 100 are released through the valve seat 992 into the medicinal dispenser 990.

[0039] As discussed further above, the preferred embodiments of our invention prevent the conventional container 100 from being mated with the medicinal dispenser 990. Specifically, the container 100 is prevented from being inserted deeply enough into the cavity 991 of the medicinal dispenser 990 for the valve stem 124 to contact the valve seat 992. Generally, the various embodiments of our invention achieve this end by increasing the overall circumference of the container 100, thereby decreasing the depth to which the container 100 can be inserted into the medicinal dispenser 990. Because the valve stem 124 cannot contact the valve seat 992, when this insertion depth is sufficiently decreased, the medicinal dispenser 990 cannot effect the release of the contents of the container.

[0040] As depicted in FIGS. 6 and 7, according to a first embodiment of our invention, a collar 210 includes an annular sidewall 211 and a tapered sidewall 212. The annular sidewall 211 has an inner surface 211a and an outer surface 211b. The inner surface 211a of the annular sidewall 211 is substantially cylindrical and, in the preferred embodiment, has a circumference that is substantially equal to a circumference about the main body 111 of the canister 110. The tapered sidewall 212 depends both in an axial direction of the collar 210

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and radially inwardly from an end of the annular sidewall 211 to generally mimic the size and angle of the tapered neck portion 112 of the canister 100. The tapered sidewall 212 includes an inner surface 212a and an outer surface 212b.

5 [0041] Of course, we anticipate modifications of the collar 210. For example, as shown in FIGS. 6-9, the inner surface 211a of the annular sidewall 211 and/or the inner surface 212a of the tapered sidewall 212 may include one or more ribs 213 depending inwardly therefrom as a portion thereof.

10 [0042] Furthermore, as illustrated in FIGS. 8A and 9, the collar 210 may include a flange 214 depending radially outwardly from the annular sidewall 211. Preferably, the flange 214 depends radially outwardly from an end of the annular sidewall 211 opposite the tapered sidewall 212. Among other functions, the flange 214 facilitates securement of the collar 210 to, and removal of the collar 210 from, the container 100 by providing an increased surface  
15 area for a user to grasp.

[0043] In operation, as shown in FIGS. 10 and 11, the collar 210 (depicted with the flange 214) is placed on the canister 110 by sliding the collar 210 over the valve assembly 120 to a point at which at least a portion of the inner surface 211a of the annular sidewall 211 contacts  
20 the canister 111 and at least a portion of the inner surface 212a of the tapered sidewall 212 contacts a portion of the tapered neck portion 112 of the canister 110. By pressing the collar 210 onto the canister 110, friction will occur between the collar 210 and the canister 110, resulting in the collar 210 being secured to the container 100 by an interference fit.

25 [0044] Effectively, as shown in FIGS. 12 and 13, the collar 210 acts to increase the circumference of at least a portion of the container 100 (here the canister 110) such that the container 100 cannot be inserted into a conventional medicinal dispenser 990. As should be

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evident, the radial thickness of the collar 210 (measured as the thickness of the annular sidewall 211 or the tapered sidewall 212) may be sufficient to create an overall increase in the circumference of the container 100 such that the depth that the container 100 can be inserted into the dispenser 990 is restricted. Alternatively, the flange 214 may provide the  
5 necessary increase in circumference to achieve the desired end.

[0045] Also, when the collar 210 includes the ribs 213, at least a portion of the ribs 213, as part of the annular sidewall 211 and/or the tapered sidewall 212, contacts the canister 110 when the collar 210 is attached to the canister 110. Similar to the collar 210 just described,  
10 i.e., without the ribs 213, friction is created between the ribs 213 and the canister 110. This friction acts to secure the collar 210 to the canister 110.

[0046] Furthermore, instead of being secured to the canister 110 by friction, the collar 210 may be adhesively secured to the canister 110. For example, glue, epoxy, or the like, may be  
15 used to adhere the collar 210 to the canister 110.

[0047] In a similar embodiment, the collar 210 may be formed such that the circumference at the end of the tapered sidewall 212 opposite the annular sidewall 211 is less than the circumference of the first cylindrical portion 121 of the valve assembly 120. With such a  
20 construction, the tapered sidewall 212 of the collar 210 must be flexible. More specifically, the tapered sidewall must be able to expand radially such that the collar 210 may be slid over the valve assembly 120. However, once secured to the canister 110, the collar 210 is more difficult to remove from the canister 110 because the circumference formed at the end of the tapered sidewall 212 opposite the annular sidewall 211 is less than the circumference of the  
25 first cylindrical portion 121 of the valve assembly 120. To increase the flexibility of the tapered sidewall 212, one or more notches 219 may be formed in the collar 210 as shown in Fig. 8B. As should be apparent, the notches 219 facilitate widening of the circumference of

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the end of the tapered sidewall 212 opposite the annular sidewall 211 so that the collar may be applied to the canister 110 by sliding the collar 210 over the valve assembly 120.

[0048] FIGS. 14 and 15 depict another embodiment of our invention. In this embodiment, a collar 320, instead of being constructed for securement to the canister 110 of the container 100, is intended to be secured to the valve assembly 120 of the container 100. As illustrated, the collar 320 includes an annular sidewall 321, a ceiling 322, and a flange 324. The annular sidewall 321 has an inner surface 321a and an outer surface 321b. The inner surface 321a is substantially cylindrical and substantially equal in circumference to the first cylindrical portion 121 of the valve assembly 120 (see FIGS. 1 and 2). The ceiling 322 depends radially inwardly from an end of the annular sidewall 321. The ceiling 322 has an undersurface 322a and an outer surface 322b, and terminates to define a circular opening 327 that is substantially concentric with the inner surface 321a of the annular sidewall 321. The flange 324 depends radially outwardly from the annular sidewall 321. Preferably, the flange 324 depends radially outwardly from an end of the annular sidewall 321 opposite the ceiling 322. The flange 324 is preferably substantially parallel to the ceiling 322.

[0049] From the description just given, and as shown in FIG. 19, it should be evident that the inner cross-sectional profile of the collar 320, i.e., the profile formed by the inner surface 321a of the annular sidewall 321 and the undersurface 322a of the ceiling 322 is substantially identical to the outer profile of the valve assembly 120, i.e., the profile formed by the first cylindrical portion 121 and the step 122 adjoining thereto.

[0050] As a further modification, the collar 320 may also include an inner annular sidewall 323 as shown in the embodiment depicted in FIGS. 16 and 17. The inner annular sidewall 323 has an inner surface 323a and an outer surface 323b. The inner annular sidewall 323 depends axially from the opening 327 formed at the termination of the ceiling 322. As

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should be evident, the collar 320 with the inner annular sidewall 323 has an inner cross-sectional profile, i.e., the profile formed by the inner surface 321a of the annular sidewall 321, the undersurface 322a of the ceiling 322 that adjoins thereto, and the inner surface 323a of the inner annular sidewall 323, which is substantially identical to the outer profile of the valve assembly 120, i.e., the profile formed by the first cylindrical portion 121, the step 122, and the second cylindrical portion 123.

[0051] In use, as depicted in FIGS. 18 and 19 (illustrating the collar 320 without the inner annular sidewall 323) the collar 320 is slid onto the valve assembly 120 such that at least a portion of the inner surface 321a of the annular sidewall 321 is proximate to the first cylindrical portion 121 of the valve assembly 120 and the underside 322a of the ceiling 322 is proximate to the step 122 of the valve assembly 120. The opening 327 is large enough such that clearance exists between the second cylindrical portion 123 and the opening 327.

Similarly, the collar 320 with the inner annular sidewall 323 is slid onto the valve assembly 120 such that at least a portion of the inner surface 321a of the annular sidewall 321 is proximate to the first cylindrical portion 121 of the valve assembly 120, the underside 322a of the ceiling 322 is proximate to the step 122 of the valve assembly 120, and the inner surface 323a of the inner annular sidewall 323 is proximate to the second cylindrical portion 123 of the valve assembly. Furthermore, in a preferred embodiment, the collar 320 is designed such that, when applied to the valve assembly 120, contact between the valve assembly 120 and the collar 320 creates friction therebetween, thus securing the collar 320 to the valve assembly 120. More specifically, the collar may be formed such that the inner surface 321a of the annular sidewall 321 has a diameter sized to form an interference fit with the first cylindrical portion 121 of the valve assembly 120. Or, the collar 320 may be formed such that the inner surface 323a of the inner annular sidewall 323 has a diameter sized to form an interference fit with the second cylindrical portion 123 of the valve assembly 120. Additionally, the inner surface 321a of the annular sidewall 321 may have a diameter that

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creates an interference fit with the first cylindrical portion 121 of the valve assembly 120 and the inner surface 323a of the inner annular sidewall 323 has a diameter that forms an interference fit with the second cylindrical portion 123 of the valve assembly 121.

5 [0052] In a further embodiment, as shown in FIGS. 14 and 15, the inner surface 321a of the annular sidewall 321 may include a lip 328 that protrudes radially inwardly. Preferably, the lip 328 is proximate to an end of the annular sidewall 321, opposite the ceiling 322. When the inner surface 321a of the annular sidewall 321 includes the lip 328, the lip 328 may be the portion of the inner surface 321a of the annular sidewall 321 that contacts the first cylindrical  
10 portion 121 of the valve assembly 120 when the collar 320 is secured to the valve assembly 120. Alternatively, the lip 328 may be formed such that it extends substantially beyond the first cylindrical portion 121 of the valve assembly 120, such that the lip 328 is proximate to a lower edge of the first cylindrical portion 121 of the valve assembly 120 opposite the step 122. (When such is the case, the collar 320 generally contacts the lower cylindrical portion  
15 121 on three sides, i.e., the step 122 side, the outer surface, and the surface proximate to the outer surface, opposite the step 122 side.)

[0053] Furthermore, either in conjunction with or instead of the interference fit between the collar 320 and the valve assembly 120, or the lip 328, the collar 320 may be secured to the  
20 valve assembly 120 via an adhesive. For example, a glue, epoxy, or the like, may be used to secure the collar 320 to the valve assembly 120.

[0054] Furthermore, as shown in FIGS. 14 and 15, the collar 320 can be further modified such that the inner surface 321a and the outer surface 321b of the annular sidewall 321 are  
25 not parallel (as opposed to the embodiment shown in FIGS. 16 and 17 in which the inner surface 321a and the outer surface 321b of the annular sidewall 321 are substantially parallel). As shown, the outer surface 321b of the annular sidewall is tapered such that the

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radial thickness of the annular sidewall 321 is greater at one end of the annular sidewall 321. Preferably, the annular sidewall 321 is thicker at the end of the annular sidewall 321 from which the flange 324 depends. Also, a radius is formed at the abutment of the outer surface 321b of the annular sidewall 321 and the outer surface 322b of the ceiling 322. These features allow the collar 320 to have a narrower diameter near the end of the collar 320 having the ceiling 322, while maintaining the rigidity and functionality of the collar 320. Such features may be desirable when using the container 100 with attached collar 320 in a dispenser designed to effect the release of the contents of the container 100.

10 [0055] Also, as with the collar 310 discussed above in connection with FIGS. 6 through 13, the flange 324 of the collar 320, among other things, acts to enlarge the diameter of the container 100 to a sufficient thickness at which the container cannot be inserted into the medicinal inhaler 990, as illustrated in FIGS. 20 and 21. It is to be understood, however, that if the annular sidewall 321 of the collar 320 is of sufficient width, the flange 324 may be unnecessary.

[0056] In a still further embodiment, FIGS. 22 and 23 show a collar 420 similar to the collar 320 discussed above in connection with FIGS. 14 through 21. The collar 420 includes an annular sidewall 421, a ceiling 422, and a flange 424. The collar 420 is further modified to include a spray tip 429. The spray tip 429 is supported on the collar 420 with at least one biasing support member 430 and is characterized as having a valve seat 431, an exit chamber 432, and a contact surface 433. The valve seat 431 is formed in the spray tip 429 to accept a valve stem 124 of a conventional container 100. The exit chamber 432, formed through the spray tip 429 and the valve seat 431, allows flow of the contents of the container 100 through the spray tip 429. The contact surface 433 is a surface upon which an actuation force is applied to allow the valve seat 431 to actuate the valve stem 124 toward the canister 110.



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[0057] When not dispensing, the spray tip 429 is held by the biasing support members 430 such that no actuation force is applied to the valve stem 124. When a sufficient force is applied to the contact surface 433, however, the biasing support members 430 move so as to allow for displacement of the spray tip 429 toward the container 100. As a result, the valve stem 124 is seated in the valve seat 431 and the valve seat 431 actuates the valve stem 124 toward the canister 110, thereby effecting a release of the contents of the container 100 through the exit chamber 432, and into the atmosphere.

[0058] While the spray tip 429 has been discussed in conjunction with the collar 420, which is similar to the collar 320 discussed above in connection with FIGS. 14 through 21, although not illustrated, it is to be understood that the spray tip 429 may also be used with a collar similar to the collar 210 discussed above in connection with FIGS. 6 through 13. In such an embodiment, the biasing support members 430 would necessarily be longer to maintain the positioning of the spray tip 429 proximate to the valve stem 124.

[0059] In each of the embodiments discussed above, the collar is preferably made of a plastic through an injection molding technique.

[0060] The embodiments discussed above are representative of preferred embodiments of our invention and are provided for illustrative purposes only. They are not intended to limit the scope of our invention. Although specific shapes, configurations, materials, etc., have been shown and described, such are not limiting. Modifications and variations are contemplated within the scope of our invention, which is intended to be limited only by the scope of the accompanying claims.

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**WE CLAIM:**

1. A collar that is securable to a container for inhibiting the coupled use of the container and a dispenser that is capable of effecting the release of the container's contents,  
5 but is not intended for that purpose, the collar comprising:

means for securing the collar to the canister; and

means for preventing the container, with the collar secured thereto, from being mated to the dispenser,

whereby the dispenser cannot effect the release of the container's contents if the  
10 container cannot be mated to the dispenser.

2. A collar according to claim 1, wherein the means for securing the collar to the container comprises an adhesive.

15 3. A collar according to claim 1, wherein the securing means comprises an interference fit between a portion of the collar and the container.

4. A collar according to claim 3, wherein the interference is created between an inner surface of the collar and the container.

20 5. A collar according to claim 4, wherein the inner surface of the collar includes one or more ribs that create the interference fit.

6. A collar according to claim 1, wherein the means for securing the collar to the  
25 canister comprises a lip extending radially inwardly from an end of a sidewall of the collar.

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7. A collar according to claim 6, wherein the lip interferes with an outer surface of the container.

8. A collar according to claim 6, wherein the lip contacts a lower edge of a valve assembly of the container.

9. A collar according to claim 1, wherein the means for preventing the canister from being mated to the dispenser comprises a portion of the collar that, when the collar is secured to the container, effectively increases an outer circumference of the container.

10. A collar according to claim 9, further comprising a flange, wherein the flange comprises the portion of the collar that, when the collar is secured to the container, effectively increases the outer circumference of the container.

11. A collar according to claim 9, further comprising an annular sidewall, wherein the annular sidewall comprises the portion of the collar that, when the collar is secured to the container, effectively increases the outer circumference of the container.

12. A collar according to claim 9, further comprising a tapered annular sidewall, wherein the tapered annular sidewall comprises the portion of the collar that, when the collar is secured to the container, effectively increases the outer circumference of the container.

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13. A collar, securable to a container having at least a main body and a tapered portion, for inhibiting the coupled use of the container and a dispenser that is capable of effecting the release of the container's contents, but is not intended for that purpose, the collar comprising:

- 5 means for securing the collar to the container;  
an annular sidewall having an inner surface; and  
a tapered sidewall having an inner surface, the tapered sidewall depending upwardly and radially inwardly from an end of the annular sidewall,  
wherein, when the collar is secured to the container, an outer circumference of the  
10 container is increased, whereby the container cannot be mated with the dispenser.

14. A collar according to claim 13, wherein, when the collar is secured to the container, at least a portion of the inner surface of the annular sidewall contacts a portion of the main body of the container and at least a portion of the inner surface of the tapered  
15 sidewall contacts a portion of the tapered portion of the container.

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15. A collar according to claim 13, wherein the means for securing the collar to the container comprises an interference between (i) at least on of the inner surface of the annular sidewall and the inner surface of the tapered annular sidewall, and (ii) an outer surface of the container.

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16. A collar according to claim 13, further comprising one or more ribs extending inwardly from at least one of the inner surface of the annular sidewall and the inner surface of the tapered sidewall, wherein the means for securing the collar to the container is an interference fit between the ribs and an outer surface of the container.

10

17. A collar according to claim 13, wherein the means for securing the collar to the container is an adhesive.

18. A collar according to claim 13, further comprising a flange that depends radially outwardly from the annular sidewall.

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19. A collar according to claim 18, wherein the flange depends radially outwardly from an end of the annular sidewall opposite the tapered sidewall.

20. A collar according to claim 13, further comprising a spray tip biasedly supported to one of the annular sidewall and the tapered sidewall.

20

21. A collar according to claim 20, wherein the spray tip has an exit chamber, and, when the collar is secured to the container, the exit chamber of the spray tip is proximate to an opening of a valve stem of the container.

25

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22. A collar according to claim 13, wherein a diameter of an end of the tapered sidewall opposite the annular sidewall is smaller than a diameter of a portion of a valve assembly of the container.

5 23. A collar according to claim 22, wherein at least the tapered sidewall is flexible such that the diameter of the end of the tapered sidewall opposite the annular sidewall may be increased.

10 24. A collar according to claim 22 further comprising one or more notches to facilitate widening of the diameter of the end of the tapered sidewall opposite the annular sidewall.

15 25. A collar, securable to a container having a valve assembly, for inhibiting the coupled use of the container and a dispenser that is capable of effecting the release of the contents of the container, but is not intended for that purpose, the collar comprising:

means for securing the collar to the container;

an annular sidewall having an inner surface;

a ceiling that depends radially inwardly from an end of the annular sidewall and that terminates to form an opening through the ceiling, the ceiling having an undersurface; and

20 a flange that depends radially outwardly from the annular sidewall,

wherein, when the collar is secured to the container, an outer circumference of the container is increased, whereby the container cannot be mated with the dispenser.

25 26. A collar according to claim 25, wherein, when the collar is secured to the container, the inner surface of the annular sidewall is proximate to a first cylindrical portion of the valve assembly of the container and the undersurface of the ceiling is proximate to a stepped portion of the valve assembly of the container.

27. A collar according to claim 25, wherein the securing means is an interference fit between the collar and the valve assembly of the container.

5 28. A collar according to claim 27, wherein a diameter of the inner surface of the annular sidewall is sized to create the interference fit with a first cylindrical portion of the valve assembly of the container.

10 29. A collar according to claim 25, further comprising an inner annular sidewall depending axially upwardly from the termination of the ceiling, the inner annular sidewall having an inner surface that is substantially concentric with the inner surface of the annular sidewall.

15 30. A collar according to claim 29, wherein the securing means is an interference fit between the collar and the valve assembly of the container.

20 31. A collar according to claim 30, wherein the interference fit is created between at least one of (i) the inner surface of the annular sidewall and a first cylindrical portion of the valve assembly of the container and (ii) the inner surface of the inner annular sidewall and a second cylindrical portion of the valve assembly of the container.

32. A collar according to claim 25, further comprising a lip extending radially inwardly from the inner surface of the annular sidewall as the securing means for securing the collar to the container.

25 33. A collar according to claim 32, wherein the securing means is an interference fit between the lip and the valve assembly of the container.

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34. A collar according to claim 32, wherein the lip contacts an edge of the valve assembly of the container.

35. A collar according to claim 32, wherein the lip contacts a lower portion of the valve assembly, the inner surface of the annular sidewall contacts an outer surface of a first cylindrical portion of the valve assembly, and the ceiling contacts a step of the valve assembly.

36. A collar according to claim 25, wherein the inner surface of the annular sidewall is parallel to an outer surface of the annular sidewall.

37. A collar according to claim 25, wherein an outer surface of the annular sidewall is tapered with respect to the inner surface of the annular sidewall.

38. A collar according to claim 37, wherein the inner surface of the annular sidewall and the outer surface of the annular sidewall are configured such that the annular sidewall is thinner at an end proximate to the ceiling than at an opposite end.

39. A collar according to claim 25, wherein a conjunction of an outer surface of the annular sidewall and an outer surface of the ceiling comprises a substantially right angle.

40. A collar according to claim 25, wherein a conjunction of an outer surface of the annular sidewall and an outer surface of the ceiling comprises a radius.

41. A collar according to claim 25, further comprising a spray tip biasedly supported to the ceiling.



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42. A collar according to claim 39, wherein the spray tip has an exit chamber, and when the collar is secured to the container, the exit chamber of the spray tip is proximate to an opening of a valve stem of the container.

5 43. A collar, securable to a container having a canister and a valve assembly including a valve stem, the collar for inhibiting the coupled use of the container and a dispenser that is capable of effecting the release of the contents of the container, but is not intended for that purpose, the collar comprising:

an annular sidewall;

10 a ceiling depending radially inwardly from the annular sidewall; and

a spray tip biasedly supported on the ceiling,

wherein, when the collar is secured to the container, the spray tip is aligned proximate to the valve stem of the valve assembly of the container and the container cannot be mated to the dispenser.

15 44. A collar according to claim 43, further comprising a flange that extends radially outwardly from the annular sidewall.

45. A collar according to claim 43, wherein the spray tip comprises:  
20 a valve seat that accepts the valve stem of the valve assembly portion of the container;  
an exit chamber, formed through the spray tip, that allows contents dispensed from the valve stem of the container to pass through the spray tip; and

a contact surface that an actuation force is applied upon,

25 wherein, when the collar is secured to the container and the actuation force is applied to the contact surface, the spray tip displaces toward the container causing the valve seat to accept and actuate the valve stem, thereby effectuating a release of the contents of the container out the valve stem, into and through the exit chamber.

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46. A collar according to claim 43, the collar further comprising means for securing the collar to the container.

5 47. A collar according to claim 43, wherein, when the collar is secured to the container, the inner surface of the annular sidewall is proximate to a first cylindrical portion of the valve assembly of the container and the undersurface of the ceiling is proximate to a stepped portion of the valve assembly of the container.

10 48. A collar according to claim 46, wherein the securing means is an interference fit between the collar and the valve assembly of the container.

15 49. A collar according to claim 48, wherein a diameter of the inner surface of the annular sidewall is sized to create the interference fit with a first cylindrical portion of the valve assembly of the container.

20 50. A collar according to claim 46, further comprising an inner annular sidewall depending axially upwardly from the inner termination of the ceiling, the inner annular sidewall having an inner surface that is substantially concentric with the inner surface of the annular sidewall.

51. A collar according to claim 50, wherein the securing means is an interference fit between the collar and the valve assembly of the container.

52. A collar according to claim 51, wherein the interference fit is created between at least one of (i) the inner surface of the annular sidewall and a first cylindrical portion of the valve assembly of the container, and (ii) the inner surface of the inner annular sidewall and a second cylindrical portion of the valve assembly of the container.

5

53. A collar according to claim 43, further comprising a lip extending radially inwardly from the inner surface of the annular sidewall.

54. A collar according to claim 53, wherein, when the collar is secured to the container, the lip forms an interference fit with a first cylindrical portion of the valve assembly of the container.

10

55. A collar according to claim 53, wherein, when the collar is secured to the container, the lip contacts an edge of the valve assembly of the container.

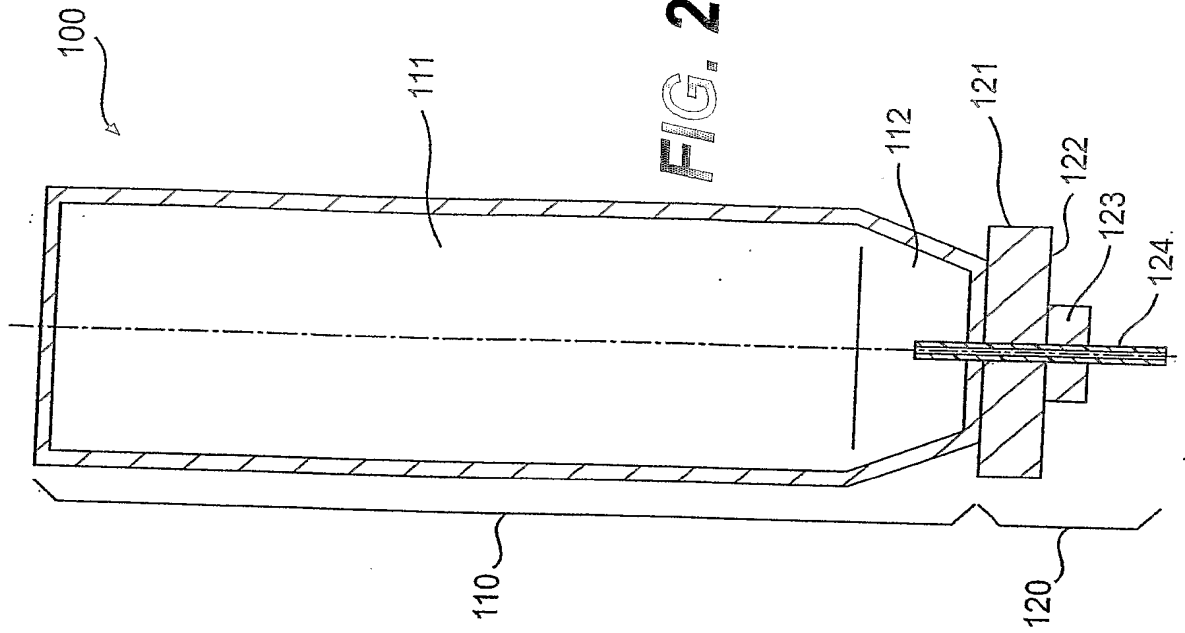
15

56. A collar according to claim 53, wherein the lip contacts a lower portion of the valve assembly, the inner surface of the annular sidewall contacts an outer surface of a first cylindrical portion of the valve assembly, and the ceiling contacts a step of the valve assembly.

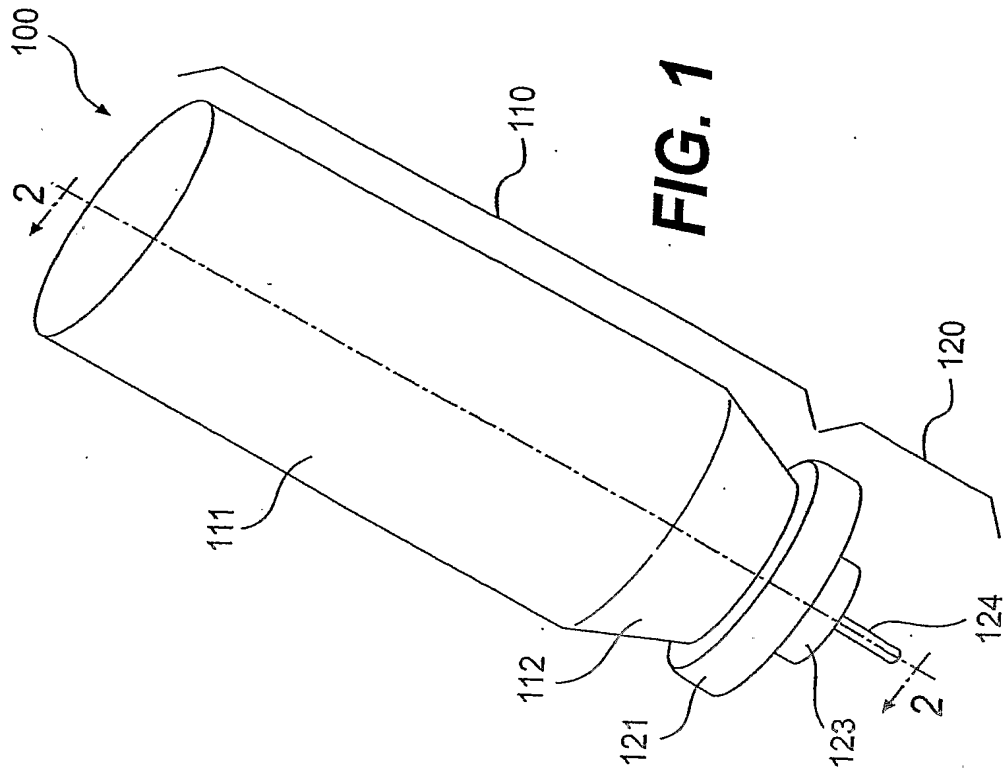
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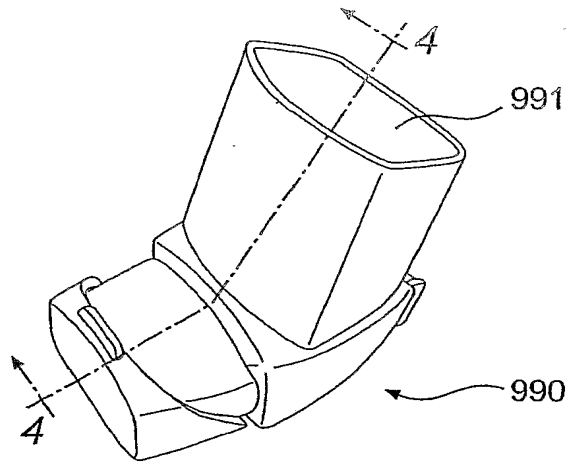
**FIG. 2**



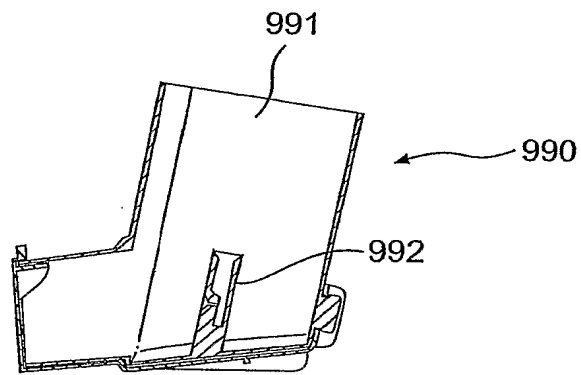
**FIG. 1**



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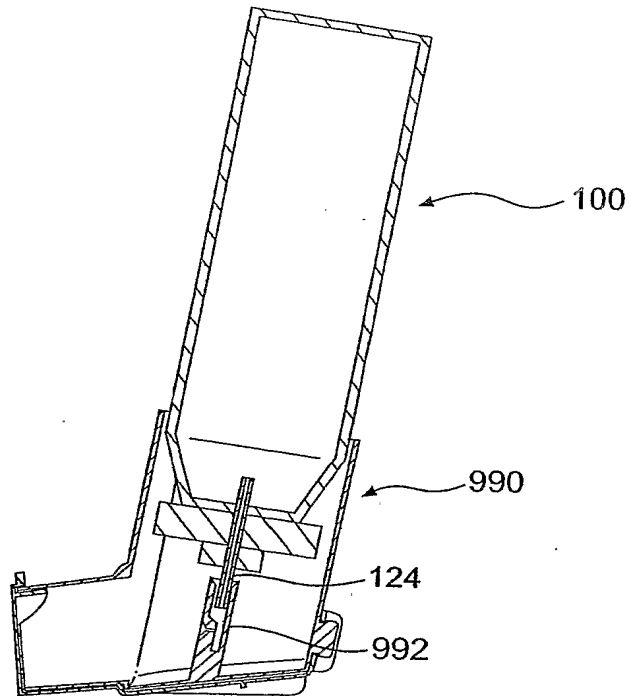


**FIG. 3**

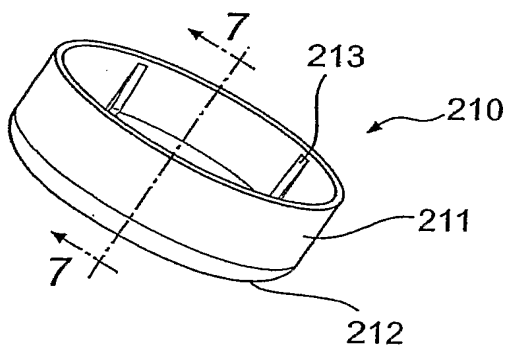


**FIG. 4**

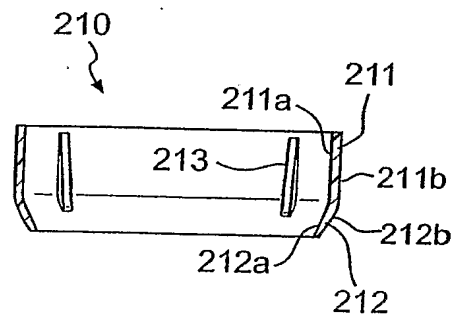
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**FIG. 5**

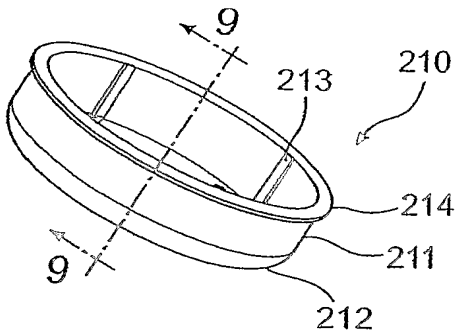


**FIG. 6**

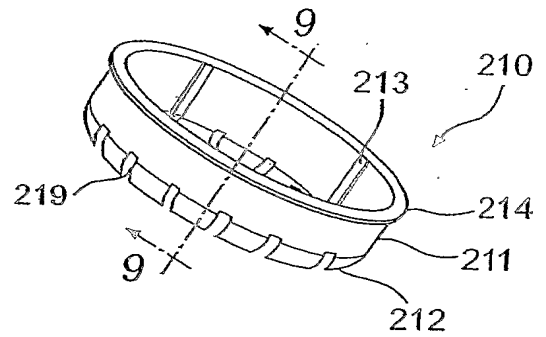


**FIG. 7**

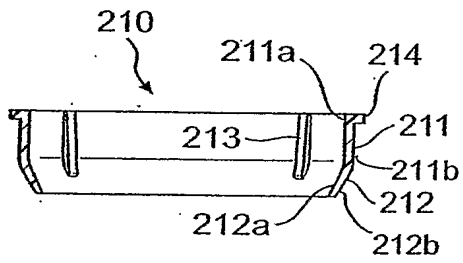
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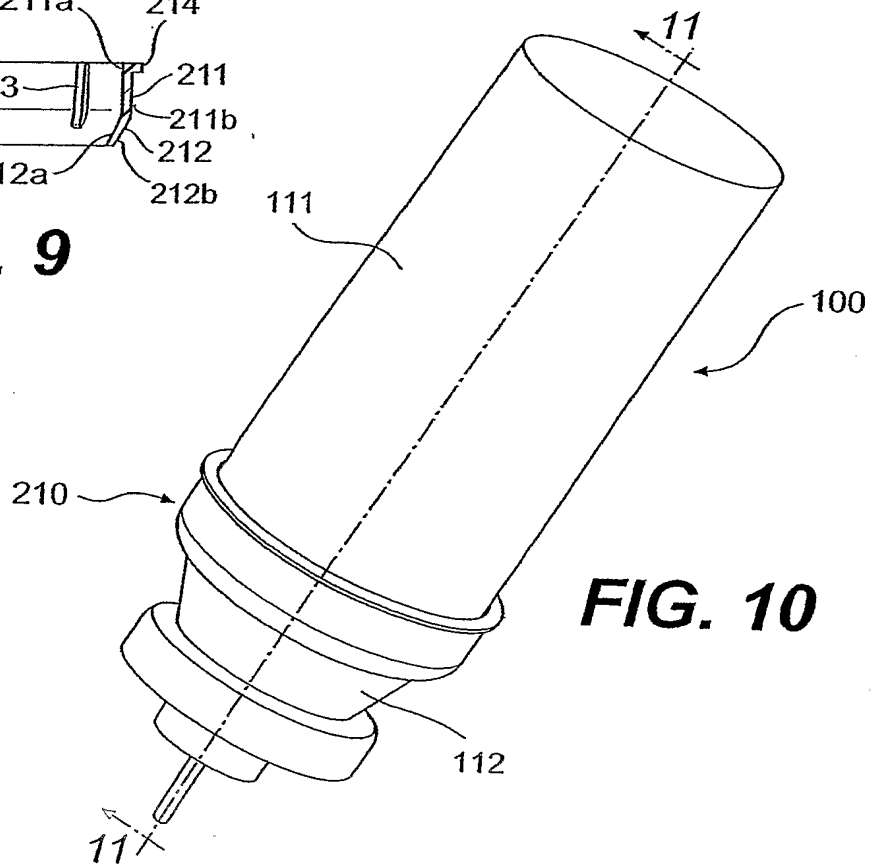
**FIG. 8A**



**FIG. 8B**

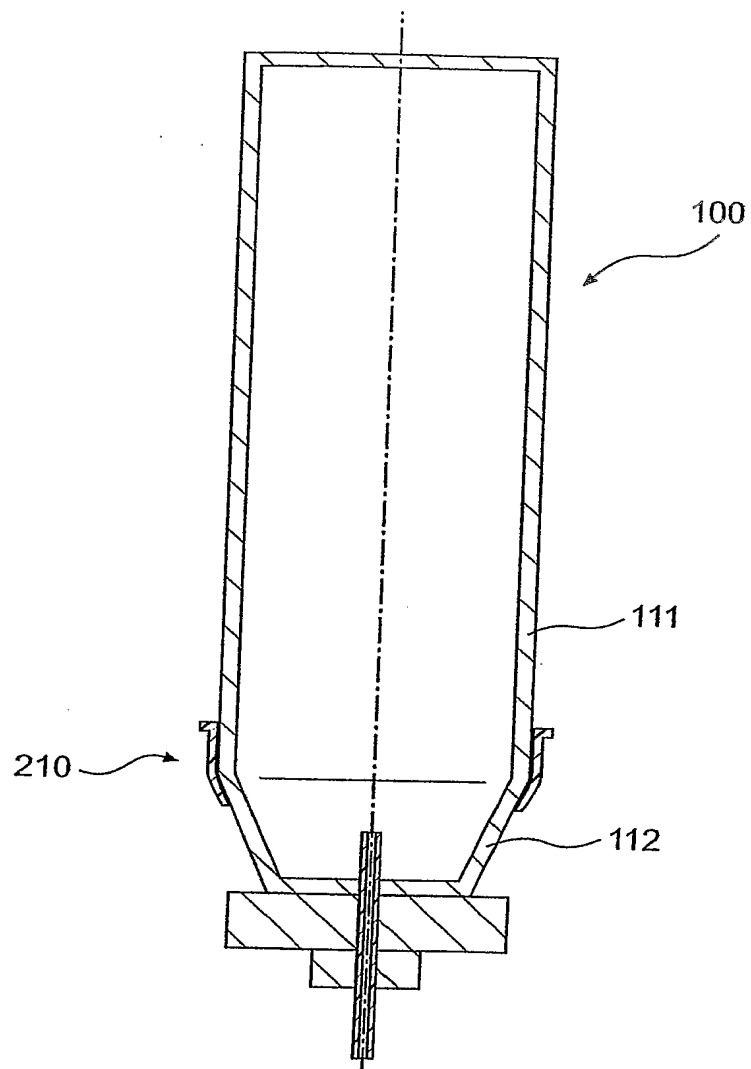


**FIG. 9**



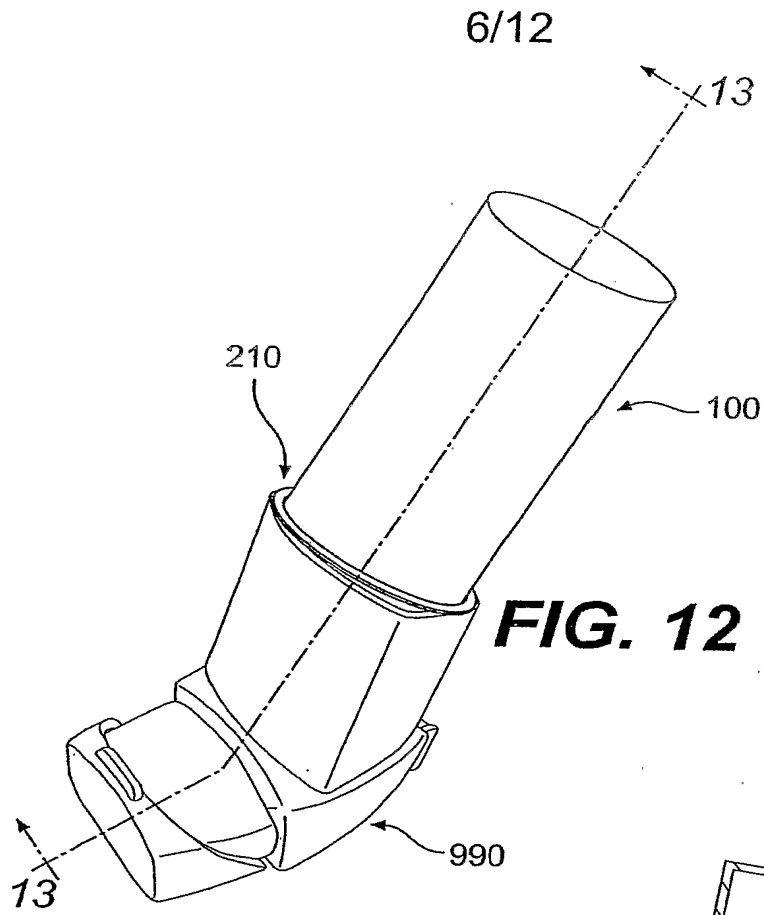
**FIG. 10**

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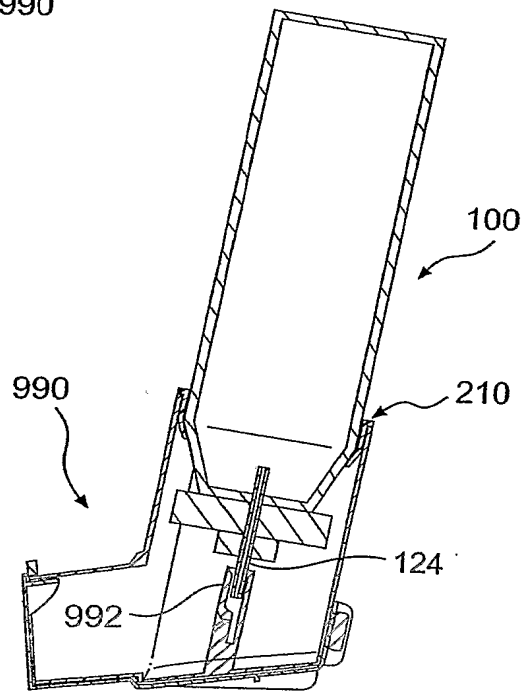


**FIG. 11**



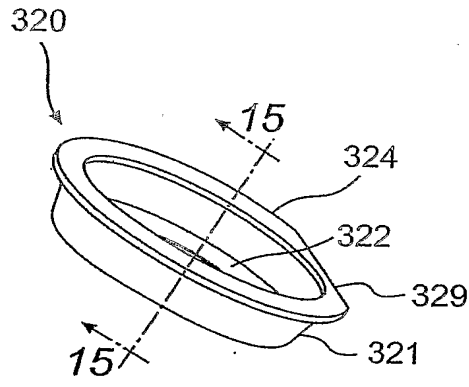


**FIG. 12**

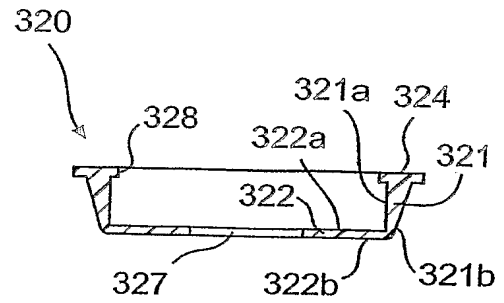


**FIG. 13**

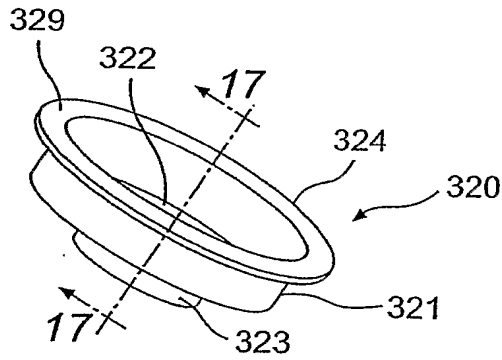
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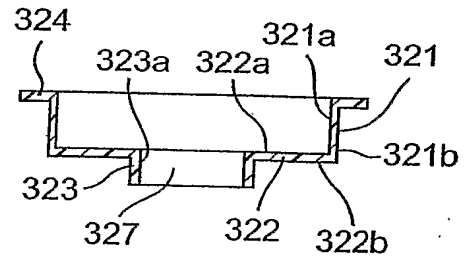
**FIG. 14**



**FIG. 15**

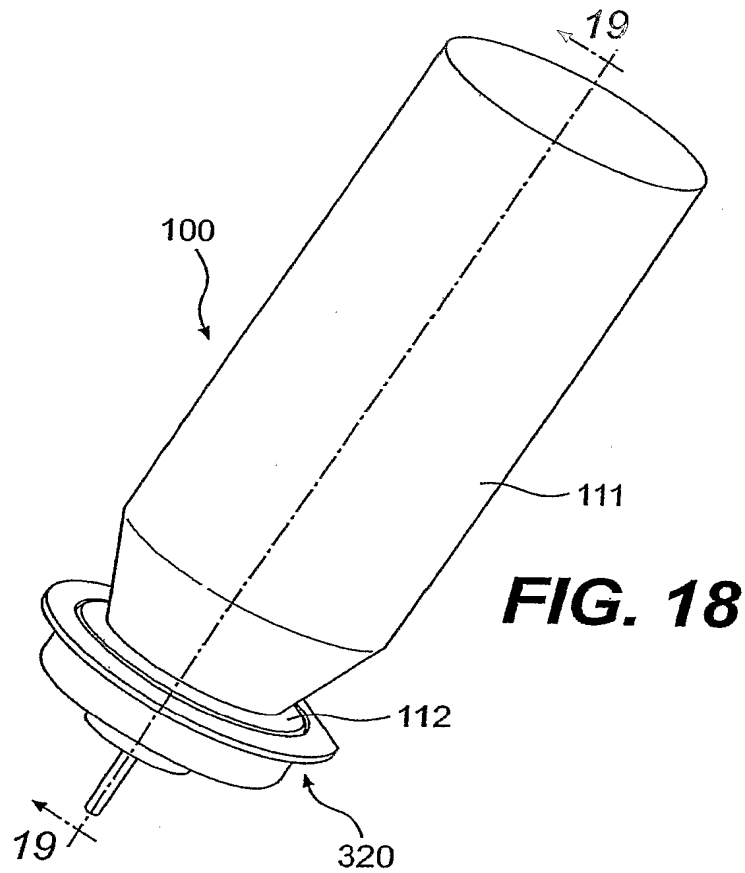


**FIG. 16**

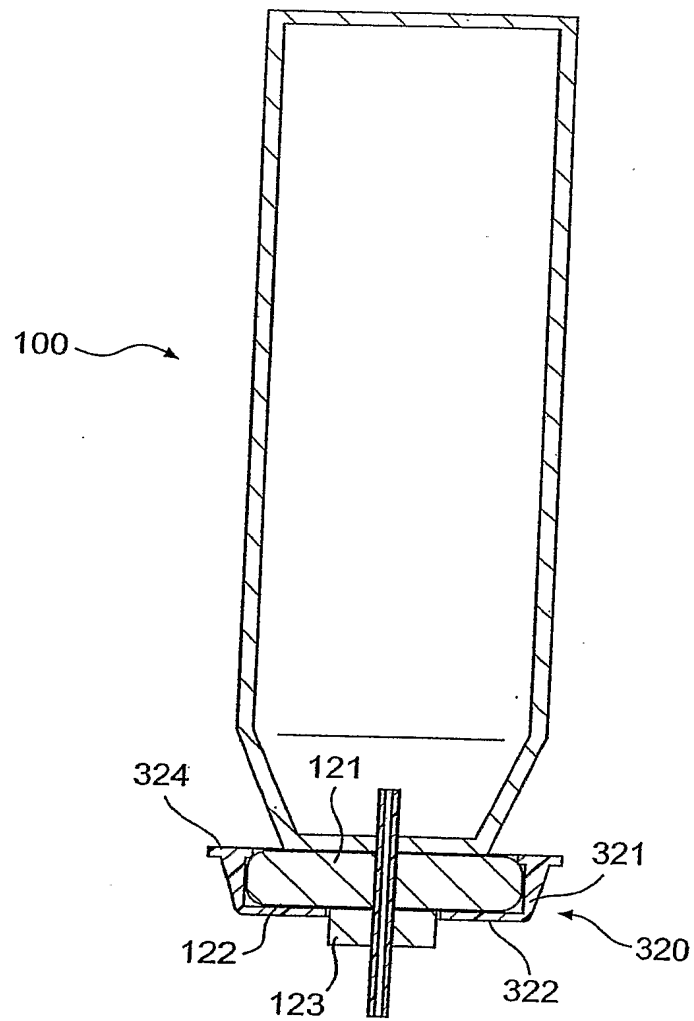


**FIG. 17**

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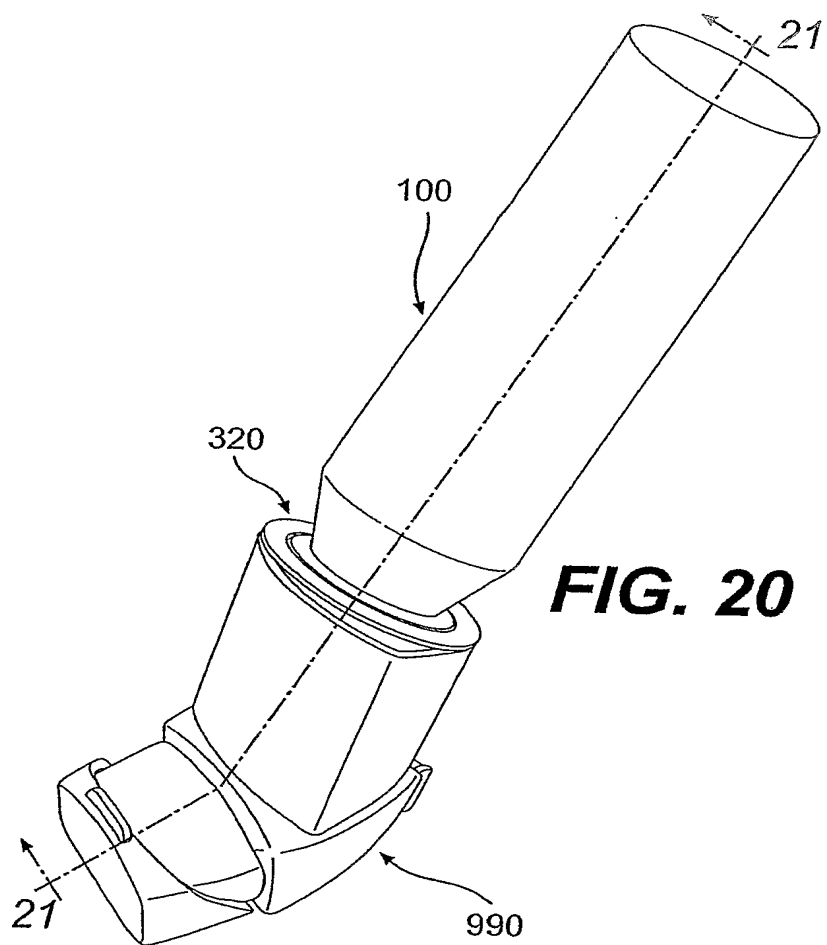


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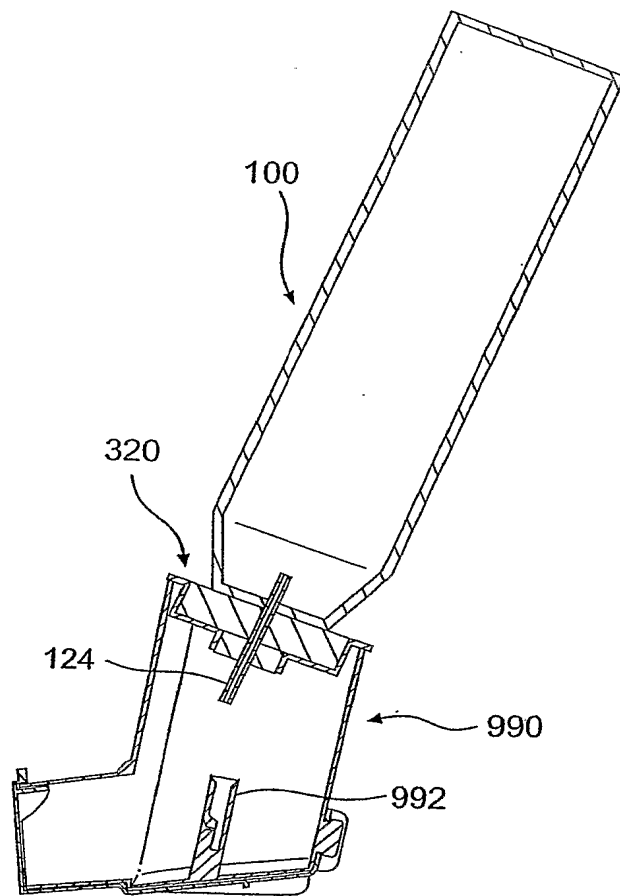


**FIG. 19**

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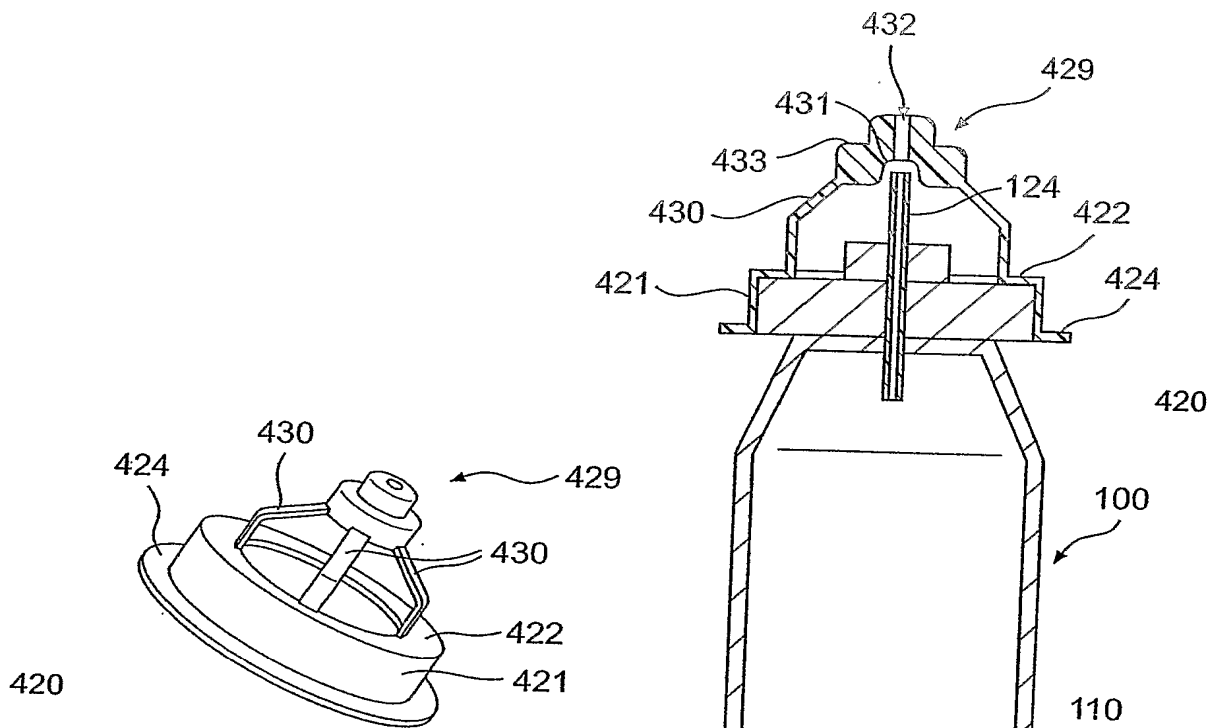


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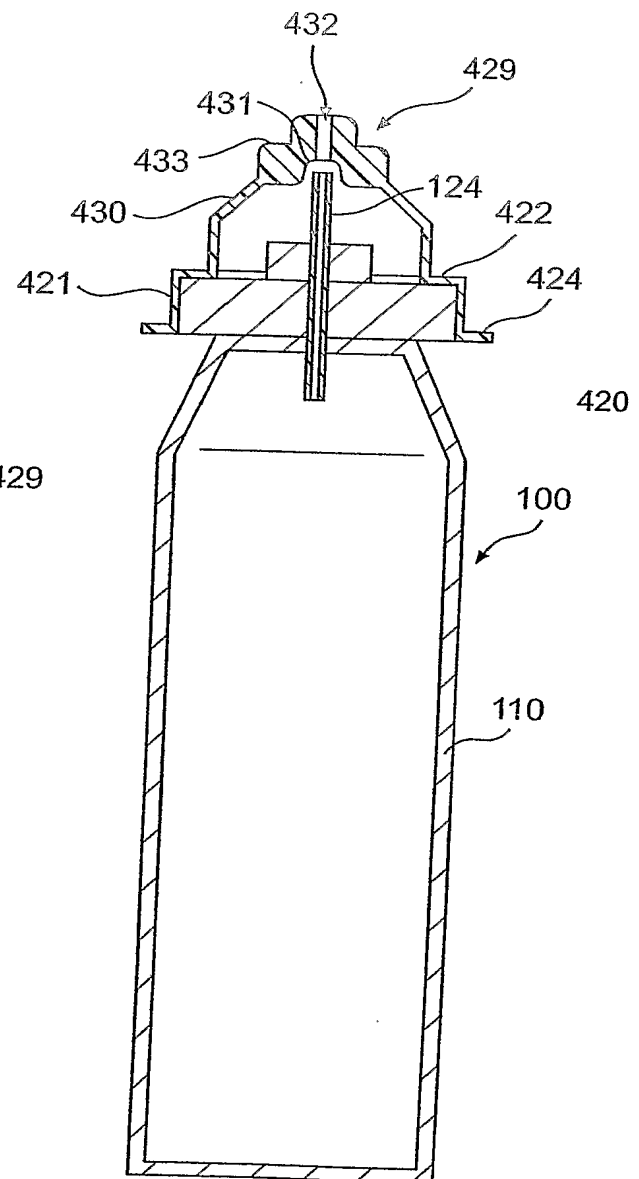


**FIG. 21**

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**FIG. 22**



**FIG. 23**